REPORT

ON THE

CAWNPORE EXPERIMENTAL STATION

FOR THE

KHARIF AND RABI SEASONS, 1888-89.

ALLAHABAD:

NORTH-WESTERN PROVINCES AND OUDH GOVERNMENT PRESS.

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Introductory.

This is the first year that, by the consent of the Government, the two reports on the kharíf and rabi seasons, which used to be issued separately, are combined in one volume.

It seems desirable in this first combined report to preface the details of the experiments with a short descriptive account of the Farm, specifying the areas under the different experimental crops and the character of the experiments in progress.

The Cawnpore Farm was started in 1874 and is consequently about 15 years old. Its area, as also the character of the experiments conducted in the early days of its history, have been subject to considerable change. Some of the experiments at present carried on date from 1874. Others, such as the green soiling series, the rabi and kharíf manuring series, the ploughing and irrigation series, date their existence in their present form from the year 1884-85: before that the plots under treatment had been subject to some extent to addition or alteration.

Experiments on the Cawnpore Farm are conducted in two places: (1) in a group of fields called "The Farm" (proper), consisting of 89 bíghas and 9 biswas; (2) in the old public garden, called "The Company Bágh," in which about 12 acres of land has been cleared for growing cereals.

The chief points aimed at by the experiments now conducted are—

(a) To estimate the value and utility of improved methods of farming compared with indigenous methods.

(b) To form an idea, by weighment of crops, of the character of the season in point of outturn, and thereby obtain independent data for checking the agricultural forecasts of harvest yield obtained from the several districts of the province.

(c) To produce pedigree seed for distribution in the country.

A brief description of the experiments now in progress for one or other of the above objects will now be given, but first it may be said that such experiments naturally fall into two groups, according as they are "permanent" (that is, continued year after year with the same plots of land), or are temporary both in respect of term and in respect of the areas under treatment. With this explanation the subjoined list of experiments will be found sufficiently intelligible.

CLASS I.—LIST OF PERMANENT EXPERIMENTS.

Serial number	Number according to khasra.	Number of plots in the series.	Name of experiment or of series.	Area.	Date of starting	Remarks.	Serial number	Number according to khasra	Number of plots in the series.	Name of experiment or of series.	Area.	Date of starting.	Remarks.
			KHARIF SEASON EXPERIMENTS.							RABI SEASON EXPERIMENTS.			
			Maize.										
1	...	13	Kharif standard ...	Each plot 400 sq yds.	1884.		1	...	13	Rabi standard ...	Each plot 400 sq yds	1884.	
2	...	13	Do. duplicate ...	Do ...	„		2	.	13	Do duplicate ...	Do. ..	„	
3	...	8	N. plots ..	Do. ...	„		3	...	8	Miscellaneous ..	Do ..	„	
							4	..	13	Green soiling, No. I ...	Do. ..	„	
							5	31+33	13	Ditto, „ II ..	4 big 6 bis	„	
							6	32	6	Ditto, „ III ...	Each plot 400 sq yds	„	
							7	1 to 4	4	Ploughing series „ I ..	300 sq yds	„	
							8	...	3	Ditto, „ II	3 bigs .	„	

CLASS II.—LIST OF PERIODICAL OR TEMPORARY EXPERIMENTS.

			Maize	B	Bis								
1	26	4	Sowing after American fashion	2	0	1885	This experiment is for five years.	1	Changeable.	6	Comparison of five varieties of wheat.	Different ...	1886
2	35	2	Sowing after American fashion, early and late sowing.	1	9	1886	Ditto.	2	Do. ...	4	Catch crops ...	Ditto ...	1887
			Cotton.										
3	×	8	Different varieties of cotton.		×	1888	This experiment is for five years. As the fields are changing, the area and khasra numbers cannot be given.	3	Do. ..	4	Comparison of four varieties of barley	Ditto ...	,

This experiment is for five years.

4	×	2	Early and late sowing of four varieties of cotton.	×	1886	Ditto.	4	Do. ...	2	Effect of gypsum on leguminous crops (gram).	Ditto ...	1887 ...		
5	×	6	Effects of certain manures on cotton.	×	1888	Ditto.	5	Do. ...	...	Ditto (peas) ...	Ditto ...	1887 ...		
			Sugarcane.				6	10 & 11	6	Mustard cake used as manure,	1¼ bighas ...	1886 ...	This experiment is for 5 years, and the fields are not changed.	
6	×	8	Aftermath *(peri)* series...	×	From 1887.	This experiment is for 5 years. Being changeable, the area and khasra numbers cannot be given.	7	27	6	Cotton cake used as manure,	1¼ ditto ...	...	Ditto.	
7	×	8	Sowing series ...	×	Do. ...	Ditto.	8	...	6	Residuary values of certain manures.	Each plot 200 square yards.	1887 ...	Ditto.	
8	×	8	Four varieties series ...	×	Do. ...	Ditto.								
			Indigo.				9	37	10	Ditto ditto ...	2 bighas ...	1886 ...	Ditto.	
9	×	2	Late and early sowing ...	×	Do. ...	Ditto.	10	28	6	Effect of certain manures on potato.	1¼ ditto ...	1888 ...	Ditto.	
10	×	3	Effect of gypsum on indigo.	×	Do. ...	Ditto.	11	...	2	Effect of kainit and woollen refuse on wheat.	...	1889 ...	This experiment is for 5 years. Field is changeable.	
11	×	40	Miscellaneous grain series,	×	1888...	This experiment is again started for 5 years from last year.	12	35	2	Sheep folding ...	1¼ bighas ...	1886 ...	Ditto.	
							13	26	2	Jethro Tull system of sowing.	1¼ ditto ...	1889 ...	Re-started from 1889.	

In class I the experiments Nos. 1, 2 and 3 of kharif and rabi are to determine—

(a) The length of time that wheat (a spring crop) and maize (a rainy season crop) can be grown year after year on the same land without material falling off in yield by the aid of artificial manures.

(b) The relative effect on the plots thus continuously cultivated of different kinds of manure.

(c) The effect of a judicious rotation of crops, as compared with a continued cropping of the land with wheat and maize alone.

Rabi experiment No. 3 is, moreover, to determine the manurial value of refuse not ordinarily used by Indian agriculturists.

Nos. 4, 5 and 6 in class I (rabi) are experiments with hemp and indigo utilized as manures.

Nos. 7 and 8 are experiments in ploughing and are of long standing. The effect of improved ploughs is compared with that of indigenous ones.

Class II, temporary experiments, kharif season, No. 1.—In 1885 a gentleman from America, Mr. Housar, visited the farm and started this experiment. It will be continued for three or four years.

Nos 2 and 4, early and late sowing of maize and cotton.—This is a very important experiment and is very carefully demonstrated.

Nos. 6 to 10, sugarcane and indigo experiments.—Were started in 1887 and will continue for 5 years.

No. 11, the miscellaneous grain serics experiment.—Was discontinued 3 years ago, but was re-started last year.

Class II. Rabi.—These experiments were all started in 1886 or 1887 and will be kept on for 5 years.

Nos. 1 and 3 are to determine the vitality and productiveness of different varieties of wheat and barley.

No. 2 is to find out the advantages of getting a catch crop from a barley or an oat field.

Nos. 4 and 5 are to demonstrate the effect of gypsum on leguminous crops.

Nos. 6 and 7 are to indicate the comparative manurial value of mustard and cotton cakes: (1) applied directly to the soil, and (2) indirectly as farmyard manure.

Nos. 8 and 9 are to ascertain the residual value of certain fertilizers.

No. 10, an experiment with potatoes on a regular system, was started last year and will be kept on for 5 years.

No. 11, kainit, was started last year, and its effect is demonstrated chiefly on wheat and potato.

No. 12, sheep folding, is a very common indigenous process and is the highest method of farming known in this country. It is being experimentally tried on the farm.

KHARIF SEASON EXPERIMENTS.

The rainy season of 1888 was unquestionably unfavorable, particularly at and around Cawnpore The rainfall aggregated 56·56 inches, the normal average being about 30 inches.

The following statement shows the exceptional heaviness of the rainfall :—

Rainfall at Cawnpore as given in the Government Gazette.		Rainfall registered at the Cawnpore Farm.	
	Inches.		Inches.
May, 1888	0·07	May, 1888	1.3
June, „	2·36	June, „	0·5
July, „	23·98	July, „	26·8
August, „	22·37	August, „	20·1
September, „	4·52	September, „	2·2
January, 1889	1·43	January, 1889	1·3
February, „	1·83	February, „	2·3
	56·56		54·5

The excessive and continuous rains of July and August ruined the kharíf crops. The seed for the most part failed to germinate, though many fields were re-sown more than once, and where it germinated at all the want of sun and heat injured the vitality of the plants. The native agriculturists had resort to the device of sowing other kinds of crops when their first crop was destroyed. But on an experimental farm this device is inadmissible; hence we suffered great loss.

Kharíf Statements I and II.

(1) *Experiments with maize, kharíf standard and duplicate series.*—This experiment is to determine the effect of ordinary and artificial manures on maize. There are 2 series, each of 13 plots; the standard plots are kept under maize year after year while the duplicate plots are alternated with wheat. Each plot is treated with the same kind of manure year after year. During the year under review these plots were sown on the 14th of July, the treatment being the same as in previous years, *viz.*, ploughing twice, weeding twice.

Soon after the sowing the heavy and continuous rain of July destroyed the seed, as nearly all plots remained under water for weeks. Every effort was made to drain the soil, but with no effect. In the beginning of August seed was sown again, but it was too late for a good result.

The standard series gave no yield at all, but the duplicate was slightly better.

For the last two years these series have been complete failures.

Kharíf Statement III.

(2) *Another series of miscellaneous manure experiments consists of 8 plots (termed the "N," e.g., natural manure series).*—These were sown early in July, being flushed once; ploughing and weeding were done three times. These too were seriously affected by the rain, except the plot manured with woollen refuse. It is worth noticing here that woollen refuse again has proved this year to be the best fertilizer for maize. This is the only plot which has given a continuously good yield for several years past.

Kharíf Statement IV.

(3) *American method of sowing maize.*—Statement No. IV compares the result of sowing maize in the American way, *i.e.*, on ridges 1, 2 and 3 feet apart, with that obtained by the country fashion of sowing. The plots were sown on the 14th of July and, being on high land, escaped injury from the excessive rain. Ploughing and weeding were done twice. No manure was applied. The result this year confirms that of previous years,—that the native method of sowing gives a heavier outturn. This experiment is for 5 years only, which period will expire after next season.

Kharíf Statement V.

(4) *Early and late sowing of maize.*—Two plots, each measuring nearly half an acre, were employed for this experiment.

One of the plots was sown on the 15th of May. The field was once flushed for sowing and was twice watered. The other plot was sown on the 27th of June, after rain. This experiment has always hitherto shown that early sowing is better, and the same result has been obtained this year. The cost of watering, Rs. 5-7-0 per acre, has, however, to be taken into account. Against this may be set the higher prices which a cultivator can obtain for an early crop of maize.

Kharíf Statement VI.

(5) *Comparison of the yield of several varieties of cotton.*—The season was even worse for cotton than for maize, and the results were very disappointing. Fresh seed of 3 varieties of cotton, namely, (1) Jones' Improved, (2) S. B. Mexey, (3) Shines' Prolific, had been obtained direct from America and the acclimatized seed of other varieties was also sown. But the whole experiment was spoilt. However two points may be considered to have been demonstrated: *(a)* that acclimatized seed (as proved before) is better than fresh imported seed; *(b)* that the Garo Hills cotton resists wet seasoning. It gave a yield of 166lbs., the largest yield of all the varieties.

The second cotton experiment, in the comparative value of early and late sowings, was a failure. The late sown plot yielded nothing, and the yield of the other plot was extremely poor.

Kharíf Statement VII.

(6) *Experiments with sugarcane.*—The first of these experiments was to determine the yield of 4 varieties of sugarcane. The seed for plots numbered (1) to (3) was obtained the year before last from the best sugar-growing districts, 1 Behia (Bengal), 2 Sháhjahánpur, 3 Moradabad.

The season was favorable for this crop, but the cane grew so high that it was beaten down by rain and the outturn was spoilt to some extent. The plots were manured with poudrette, 400 maunds per acre. They were sown on the 1st of March in two ways: *(a)* according to the indigenous way of sowing, *(b)* in lines as sown in West India settlements. They were hand hoed three times and watered five times. The yield of juice was very good, but the plots in which the cane had been beaten down by the rain did not produce fine *ráb* or *gur*.

Besides the determination of the comparative yield, the experiment was also meant to illustrate the comparative merits of sowing in the West India system and according to the native method. The results, as exhibited in Statement VII, show that the indigenous variety of cane as well as the indigenous method of sowing proves to be more suitable for this country. The same result was obtained last year.

Kharíf Statement VIII.

(7) Another experiment with sugarcane was the determination of the relative economy of what is known as *peri*, namely, a second crop of sugarcane from the same plants. Accordingly the roots of the sugarcane crop sown the year before last were kept in the field, which was top dressed with farmyard manure at 200 maunds per acre, was hand hoed twice and watered five times.

The total cost of maintaining the field is calculated at Rs. 33 per acre, namely, rent of land Rs. 10, manure Rs. 6, hoeing and watering Rs. 10, making gur Rs. 7, total Rs 33. The total income per acre has been Rs. 53; the net profit is Rs. 20. There would therefore not seem to be much gain to a cultivator from this special form of cultivation known as *peri*.

Kharíf Statement IX.

(8) *Experiment with indigo.*—As gypsum is a special manure for leguminous crops, and deposits of it have lately been discovered in several places in the province, particular attention has been directed for the last two years to ascertain its effect on indigo. It has been given gratis to several indigo planters for trial, and, so far as their opinions are known, they corroborate the result obtained on the farm.

The experimental plots sown with indigo and either manured or top dressed with gypsum were seriously affected by the heavy rains, but they gave heavier yield than the other plots to which gypsum was not applied.

Kharíf Statement X.

(9) Statement X gives details of an experiment in early and late sowings of indigo, as well as of the manurial value of gypsum against farmyard manure. Four plots were used, of which two were sown before the rains and two after they had set in. The late sown crop utterly failed, and the yield from the other two plots was poor; but of these two, that treated with gypsum gave the best results.

Kharíf Statement XI.

(10) *Miscellaneous experiments.*—In a series of 17 plots, each of 400 square yards, millet and other rain crops were sown. The object of this experiment is to test the comparative value of the ordinary rain crops cultivated in these Provinces. Owing to the season, the outturn of these plots was generally poor.

RABI SEASON EXPERIMENTS.

The rabi season experiments are chiefly restricted to wheat. Potato, barley, peas and gram have lately been added to the list. These occupy but a very limited area of wheat. The variety known in this Province as "Muzaffarnagar" (soft white) is, for the most part, sown; next to it in quantity is the beardless indigenous variety, called "Mundia," and on a much smaller scale Sindhi, Adelaide and Buxar.

In all, 21 acres were under wheat, of which area 15·5 acres were under different experiments, while 5·5 acres were sown for seed.

The average outturn per acre has been 13 maunds, ranging from 21 maunds or 29 bushels to 7·75 maunds or 10 bushels per acre. The fair average per acre in this country is 16 maunds or about 22 bushels, and in England about 22 maunds or 30 bushels. The season was very unfavorable for wheat, as the abnormal rain in February and March greatly injured what at one time promised to be a good crop. Rust was generated, and the grain proved to be small and discolored. The Muzaffarnagar variety of soft white wheat suffered least: the beardless variety called *mundia* proved to be most liable to be affected by rust.

The following is the detail of the experiments:—

(1) *The standard and duplicate series.*—This experiment is to determine *(a)* the effect of certain manures on wheat, *(b)* the advantages of rotation, *(c)* how long wheat can be grown year after year on the same land, and which manure best returns to the soil what the plant withdraws. Rabi Statements I and II.

The two series are of 13 plots each, every plot measuring 400 square yards. Each plot receives a particular kind of manure year after year, save one, which is always unmanured. The treatment of the duplicate plots in point of manure is precisely the same as that of the corresponding plots in the standard series; but the latter are cropped with wheat year after year, while the former are alternated with wheat and maize.

In this season, as usual, Muzaffarnagar wheat at the rate of 60 seers per acre was sown on the 13th of October. Other treatments were as follows: ploughing three times, weeding once, watering three times.

The standard plots germinated very well, but were bitten by frost to a certain extent, while the duplicate ones suffered more. This is an exceptional year, as the outturn of several of the duplicate plots was less than the standard ones. As a rule, it has been better. On the whole, the outturn of these series in this season was better than that of many other series. Poudrette in both series gave a good outturn.

(2) *Green manure series.*—This also consists of 13 plots, each of 400 square yards. The experiment is to determine the manurial value of vegetable substances in various forms. It shows that indigo and hemp, like clover in Europe, prepare the land for wheat. If ploughed in, they act as manure; while if removed as a crop, they still improve the ensuing crop of wheat. Our experiments have also shown that more profit is derived from cropping the indigo or hemp and then sowing wheat than from ploughing the former in—without realizing the outturn. Rabi Statement III.

The plots in these series were sown with Muzaffarnagar wheat at 60 seers per acre on the 25th of October, the other treatments being the same as described above.

Indigo refuse has given better results than the indigo crop which was ploughed in. Both kinds of indigo refuse and also green soiling with hemp have given good outturn of grain. The plots manured with indigo and hemp water and the unmanured plots yielded little grain. The cost of indigo and hemp water at the farm is very high, owing to the distance of cartage. These fertilizers can only be economically used in close proximity to indigo and hemp factories.

(3) Rabi Statement IV contains the results of a further experiment in green soiling. Separate fields were manured with green indigo and hemp. The indigo series consists of six plots, each of 800 square yards. Four of them are green soiled, as detailed Rabi Statement IV.

in the statement, and two are kept unmanured. The hemp series consists of 13 plots of different acres, all of them being of two acres. In seven of these, hemp is ploughed in and six are kept unmanured. The result shows the advantages of manuring. In spite of the cost of fertilizers, the income per acre is comparatively much larger than from the unmanured land. In this instance too it has been proved that indigo refuse mixed with lime is very effective.

Rabi Statement V. (4) This experiment is to determine the effect of certain rubbish which ordinarily has no place in the list of manures known to the Indian agriculturists. The experiment, as usual, shows that the manured plots in many cases have given more yield than the unmanured one; that saltpetre is effective; that ammonia chloride has again failed, and that without the application of some good and rich fertilizers the plots in this series are gradually losing their fertility. The last one is the important point to be observed.

These plots were sown on the 24th October with Muzaffarnagar wheat, other treatments being exactly the same as in the other experiments.

Rabi Statement VI. (5) This experiment is to determine the effect of shallow and deep ploughing, or rather the effect of ploughing with the country plough and with improved ploughs. The experiment is carried on in two different places. In one place there are four plots and in the other three. They are respectively of 300 and 2,450 square yards each. Muzaffarnagar wheat was sown in them on the 24th October and 5th November, and they were subject to the same treatment as all other series. The three plots, this year, were manured with woollen refuse at 120 maunds per acre.

The result is again in favor of deep ploughing. Ploughing nine inches deep has given more yield than five inch ploughing. It may be noted that hitherto no manure was given to these series: consequently the produce had been reduced considerably. This year three plots were manured, and consequently the yield has greatly increased all round; yet the effect of deep ploughing is still perceptible in the comparative outturn of the several fields.

All the foregoing rabi experiments may be termed permanent or unchangeable. They have not been varied in the least for the last five years, and some date back to the opening of the Farm. No time for their duration is fixed. No other crop of any kind is grown in the fields set apart for these series, and the treatment will remain in all respects in future precisely as it is at present.

The next mentioned experiments are temporary or for a fixed period: most of them are for five years. In these, sometimes necessarily, little changes occur, and the fields are also changeable.

Rabi Statement VII. (6) *Experiment with cotton seed and mustard cake, as well as with the dung of cattle fed on the same stuff.*—This is to ascertain (1) the comparative manurial value of (*a*) cotton seed and mustard cake against the same stuff fed dungs, (*b*) of rich farm yard manure against plain dung; (2) to what extent good feeding of live stock is a gain to a farmer in the shape of obtaining good and rich manure; (3) whether nitrogen may be more economically added to the soil by directly manuring the fields with nitrogenous substances existing in cattle food or by converting them into dung. The treatments of the season were ploughing three times Muzaffarnagar wheat seed sown at 60 seers per acre on the 25th October, weeding once and watering three times. All the plots were previously manured with common manure, at the rate of 100 maunds per acre. The best yield both in grain and straw was from a plot treated with dead cotton seed. The value of the several manures applied is clearly seen in the increased yield as compared with the yield of the unmanured plots. Yet the largest net profit was on one of the latter plots. This experiment, which is for five years, was commenced in 1885-86.

Rabi Statement VIII. (7) This experiment is to demonstrate for how long the residue of a fertilizer remains available for wheat. The statement shows the residual effect of the artificial manures which had been applied to the plots for four consecutive years up to 1885. Since then no manure of any kind has been given. Series B in the statement in question

indicates the residual result of ordinary and artificial manures of nearly all kinds that are in use on the Farm. These were applied in the year 1885-86. The result again is in favor of ordinary farmyard manure.

(8) *Experiment with kainit.*—Kainit is a potassic manure, good for grasses and for wheat. Rabi Statement IX

This is the first year that it has been tried on the Farm. It was applied along with green hemp to one plot, with farmyard manure to three plots, and with woollen refuse to four plots.

Muzaffarnagar wheat was sown in all of the plots on the 22nd and 23rd October. All the treatments were the same as usual. Kainit when combined with woollen refuse has given the largest yield : I may say largest of all the fields in the farm. With farmyard manure it has given very good results too, and with green manure also has not been bad. As this is the first year, nothing can be definitely decided about its value ; but the experiment will continue for four years more, and it will be fully tested.

(9) This experiment was made to observe the effect of grazing down and nibbling wheat, in order to check too luxuriant growth of straw. Muzaffarnagar wheat was sown at 60lbs. per acre on the 4th of November (late in season). The land had maize in kharíf in it, and after taking the maize crop it was prepared for rabi and was manured by folding sheep in it. Only two waterings and one weeding were given. A very fair yield in grain and a distinctly good outturn of straw were obtained from the portions grazed down and nibbled by the sickle : on the portion left intact the yield of grain was about the same, while that of straw was considerably less. Rabi Statement X.

(10) In this experiment the Jethro Tull or Lois Weeden system of sowing on raised up strips of land was compared with the ordinary method of sowing. The Jethro Tull system of sowing is that in a field strips of land of equal width are marked out and six inches depth of earth from one strip is thrown upon the other, so that one strip is thus raised one foot higher than the other. On these raised up strips wheat is sown in line. In a piece of land of 1,936 square yards 21 strips were made,—11 raised, 10 depressed. In six of the latter strips a leguminous crop was sown. Rabi Statement XI.

Muzaffarnagar wheat was sown on the 29th of October. The statement shows that wheat sown in the indigenous way has given a better crop than that sown on the strips, and if the cost of making the latter be taken in calculation, the Tull system of sowing is evidently useless in India.

(11) In this experiment the productive power and vitality of four varieties of wheat compared with the indigenous variety (Mundia) were tested. In five plots of 400 square yards each, the different kinds of wheats were sown side by side : 60 seers of seed per acre of each kind were sown. All had one kind of treatment throughout the season. Of course the bad season and heavy rain had different effects on them. In this series the country Mundia wheat has given the largest crop. Generally on the farm the yield of Muzaffarnagar was found best, as on other plots the country variety proved to be more susceptible to fungoid disease. Buxar wheat did worst of all. Rabi Statement XII.

(12) This experiment was with three special varieties of huskless barley and was made with a view of ascertaining their value in the English market. These varieties have been propagated on the Farm from a very small quantity of seed. However, this year we were able to send three maunds of the chocolate colored variety to Kew for opinion. None of the varieties yielded as much either in grain or straw as the common country barley, a plot of which was sown for comparison. Rabi Statement XIII.

(13) In this experiment the value of gypsum mixed with farmyard manure on leguminous crops was tried. Both with gram and peas it gave a larger outturn than farm manure alone, but not enough to cover the extra cost. Rabi Statement XIV.

(14) The last experiment to be mentioned was one to ascertain the effect of special manures on potato. The field, after being manured and well prepared according to Rabi Statement XV.

in the statement, and two are kept unmanured. The hemp series consists of 13 plots of different acres, all of them being of two acres. In seven of these, hemp is ploughed in and six are kept unmanured. The result shows the advantages of manuring. In spite of the cost of fertilizers, the income per acre is comparatively much larger than from the unmanured land. In this instance too it has been proved that indigo refuse mixed with lime is very effective.

Rabi Statement V.

(4) This experiment is to determine the effect of certain rubbish which ordinarily has no place in the list of manures known to the Indian agriculturists. The experiment, as usual, shows that the manured plots in many cases have given more yield than the unmanured one; that saltpetre is effective; that ammonia chloride has again failed, and that without the application of some good and rich fertilizers the plots in this series are gradually losing their fertility. The last one is the important point to be observed.

These plots were sown on the 24th October with Muzaffarnagar wheat, other treatments being exactly the same as in the other experiments.

Rabi Statement VI.

(5) This experiment is to determine the effect of shallow and deep ploughing, or rather the effect of ploughing with the country plough and with improved ploughs. The experiment is carried on in two different places. In one place there are four plots and in the other three. They are respectively of 300 and 2,450 square yards each. Muzaffarnagar wheat was sown in them on the 24th October and 5th November, and they were subject to the same treatment as all other series. The three plots, this year, were manured with woollen refuse at 120 maunds per acre.

The result is again in favor of deep ploughing. Ploughing nine inches deep has given more yield than five inch ploughing. It may be noted that hitherto no manure was given to these series: consequently the produce had been reduced considerably. This year three plots were manured, and consequently the yield has greatly increased all round; yet the effect of deep ploughing is still perceptible in the comparative outturn of the several fields.

All the foregoing rabi experiments may be termed permanent or unchangeable. They have not been varied in the least for the last five years, and some date back to the opening of the Farm. No time for their duration is fixed. No other crop of any kind is grown in the fields set apart for these series, and the treatment will remain in all respects in future precisely as it is at present.

The next mentioned experiments are temporary or for a fixed period: most of them are for five years. In these, sometimes necessarily, little changes occur, and the fields are also changeable.

Rabi Statement VII.

(6) *Experiment with cotton seed and mustard cake, as well as with the dung of cattle fed on the same stuff.*—This is to ascertain (1) the comparative manurial value of (*a*) cotton seed and mustard cake against the same stuff fed dungs, (*b*) of rich farm yard manure against plain dung; (2) to what extent good feeding of live stock is a gain to a farmer in the shape of obtaining good and rich manure; (3) whether nitrogen may be more economically added to the soil by directly manuring the fields with nitrogenous substances existing in cattle food or by converting them into dung. The treatments of the season were ploughing three times Muzaffarnagar wheat seed sown at 60 seers per acre on the 25th October, weeding once and watering three times. All the plots were previously manured with common manure, at the rate of 100 maunds per acre. The best yield both in grain and straw was from a plot treated with dead cotton seed. The value of the several manures applied is clearly seen in the increased yield as compared with the yield of the unmanured plots. Yet the largest net profit was on one of the latter plots. This experiment, which is for five years, was commenced in 1885-86.

Rabi Statement VIII.

(7) This experiment is to demonstrate for how long the residue of a fertilizer remains available for wheat. The statement shows the residual effect of the artificial manures which had been applied to the plots for four consecutive years up to 1885. Since then no manure of any kind has been given. Series B in the statement in question

indicates the residual result of ordinary and artificial manures of nearly all kinds that are in use on the Farm. These were applied in the year 1885-86. The result again is in favor of ordinary farmyard manure.

(8) *Experiment with kainit.*—Kainit is a potassic manure, good for grasses and for wheat. Rabi Statement IX.

This is the first year that it has been tried on the Farm. It was applied along with green hemp to one plot, with farmyard manure to three plots, and with woollen refuse to four plots.

Muzaffarnagar wheat was sown in all of the plots on the 22nd and 23rd October. All the treatments were the same as usual. Kainit when combined with woollen refuse has given the largest yield : I may say largest of all the fields in the farm. With farmyard manure it has given very good results too, and with green manure also has not been bad. As this is the first year, nothing can be definitely decided about its value ; but the experiment will continue for four years more, and it will be fully tested.

(9) This experiment was made to observe the effect of grazing down and nibbling wheat, in order to check too luxuriant growth of straw. Muzaffarnagar wheat was sown at 60lbs. per acre on the 4th of November (late in season). The land had maize in kharif in it, and after taking the maize crop it was prepared for rabi and was manured by folding sheep in it. Only two waterings and one weeding were given. A very fair yield in grain and a distinctly good outturn of straw were obtained from the portions grazed down and nibbled by the sickle : on the portion left intact the yield of grain was about the same, while that of straw was considerably less. Rabi Statement X.

(10) In this experiment the Jethro Tull or Lois Weeden system of sowing on raised up strips of land was compared with the ordinary method of sowing. The Jethro Tull system of sowing is that in a field strips of land of equal width are marked out and six inches depth of earth from one strip is thrown upon the other, so that one strip is thus raised one foot higher than the other. On these raised up strips wheat is sown in line. In a piece of land of 1,936 square yards 21 strips were made,—11 raised, 10 depressed. In six of the latter strips a leguminous crop was sown. Rabi Statement XI.

Muzaffarnagar wheat was sown on the 29th of October. The statement shows that wheat sown in the indigenous way has given a better crop than that sown on the strips, and if the cost of making the latter be taken in calculation, the Tull system of sowing is evidently useless in India.

(11) In this experiment the productive power and vitality of four varieties of wheat compared with the indigenous variety (Mundia) were tested. In five plots of 400 square yards each, the different kinds of wheats were sown side by side : 60 seers of seed per acre of each kind were sown. All had one kind of treatment throughout the season. Of course the bad season and heavy rain had different effects on them. In this series the country Mundia wheat has given the largest crop. Generally on the farm the yield of Muzaffarnagar was found best, as on other plots the country variety proved to be more susceptible to fungoid disease. Buxar wheat did worst of all. Rabi Statement XII.

(12) This experiment was with three special varieties of huskless barley and was made with a view of ascertaining their value in the English market. These varieties have been propagated on the Farm from a very small quantity of seed. However, this year we were able to send three maunds of the chocolate colored variety to Kew for opinion. None of the varieties yielded as much either in grain or straw as the common country barley, a plot of which was sown for comparison. Rabi Statement XIII.

(13) In this experiment the value of gypsum mixed with farmyard manure on leguminous crops was tried. Both with gram and peas it gave a larger outturn than farm manure alone, but not enough to cover the extra cost. Rabi Statement XIV.

(14) The last experiment to be mentioned was one to ascertain the effect of special manures on potato. The field, after being manured and well prepared according to Rabi Statement XV.

the indigenous method, was divided into five plots of 726 square yards each. To four of these special manures were applied, as shown in the statement. These were then sown with the variety of potato locally called here white or *Madrasi*. The seed was obtained from Farukhabad and was sown on the 19th of October, at the rate of 8 maunds per acre. The plot manured with kainit from the beginning did badly. In growth the plants did not reach the usual height, and frost seemed to have affected them, as the leaves shrivelled and became yellow.

The experiment is for five years, and this is the second trial. The treatments were ploughing four times; weeding, hoeing and earthening up ridges four times.

The crop was dug and removed from the field on different dates from 16th to 27th February. Poudrette with sulphate of iron gave the largest yield, and next to it came woollen refuse with gypsum. The latter produced potatoes of the largest size and best quality: had not a part of this plot been spoilt, its yield would have been the highest. Last year castor oil cake gave the best result.

MEER MOHAMMAD HUSSAIN, M.R.A.C.,

Assistant Director, Department of Land Records and Agriculture, N.-W. P. and Oudh.

KHARIF STATEMENT No. I.—STANDARD SERIES MANURE EXPERIMENT WITH MAIZE.

Quantity of manure applied per acre.	Value of manure.	Calculation of the result and comparison of outturn with the unmanured plot in the series.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.							
		1	2	3	4	5	6	7	8	9		10			11	12	13
		Number of plot as per map of Farm.	Weight of unthreshed cobs.	Weight of grain.	Weight of stalks.	Percentage of grain on stalks.	Percentage of stalks on grain.	Increase or decrease against unmanured plot.	Increase or decrease per acre.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation, assumed to be Rs. 16-8.	Gain or loss per acre in the value of outturn against that of ordinary cultivation assumed to be Rs. 20.	Net profit or loss over or against the assumed income, Rs. 20.
										Grain.	Stalks.	Grain at Re. 1 per 41lbs.	Stalks at Re. 1 per 410lbs.	Total.			
	Rs. a. p.		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. Cow dung 180 maunds, and bone dust 360lbs.	3 10 9	1	6	4	21	19	525	+4	+48	48	254	1 3 0	0 10 3	1 13 3	8 10 9	—18 2 9	—26 13 6
2. Cow dung 180 maunds, and gypsum 240lbs.	10 8 0	2	...	...	13	...	...	...	...	...	157	...	0 6 2	0 6 2	10 8 0	—19 9 10	—30 1 10
3. Cow dung 180 maunds ...	5 6 0	3	...	...	10	...	...	...	...	...	121	...	0 5 0	0 5 0	5 6 0	—19 11 0	—25 1 0
4. Ashes of 180 maunds of cow dung.	15 8 0	4	3	2	14	14	700	+2	+24	24	169	0 9 6	0 6 9	1 0 3	15 8 0	—18 15 9	—34 7 9
5. Saltpetre 240lbs. ...	10 5 0	5	3	2	16	12	800	+2	+24	24	194	0 9 6	0 7 9	1 1 3	10 5 0	—18 14 9	—29 3 9
6. Saltpetre and bone superphosphate 240lbs.	20 0 0	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Sheep dung 180 maunds and bone dust 360lbs.	8 0 0	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8. Ashes of 180 maunds dung and saltpetre 240lbs.	15 13 0	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9. Poudrette 180 maunds ...	8 12 0	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10. Sheep dung 180 maunds ...	5 6 0	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Saltpetre 240lbs. and bone dust 360lbs.	13 9 9	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12. Sheep dung 180 maunds and gypsum 240lbs.	10 8 0	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. No manure	...	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Area of each plot is 400 square yards.

KHARIF STATEMENT No. II.—KHARIF DUPLICATE SERIES MANURE EXPERIMENT WITH MAIZE.

Quantity of manure applied per acre.	Value of manure.	Calculation of result and comparison of outturn with the unmanured plot.								Comparison of cost with the ordinary kind of cultivation in vogue in this country.							
		Number of plot as per map of Farm.	Weight of threshed cobs.	Weight of grain.	Weight of stalks.	Percentage of grain on stalk.	Percentage of stalk on grain.	Increase or decrease against unmanured plot.	Increase or decrease per acre.	Actual outturn.		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 10-8-0.	Gain or loss per acre in the value of outturn against that of ordinary cultivation assumed to be Rs. 20.	Net profit or loss over or against the assumed income, Rs. 20.
										Grain.	Stalk.	Grain @ Re. 1 per 41lbs.	Stalk @ Re. 1 per 410lbs.	Total.			
	Rs. a. p		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p	Rs. a. p.	Rs. a. p.
1. Sheep dung 180 maunds	5 6 0	1	15	10	45	22	450	−20	−242	121	544	2 15 0	1 5 0	4 4 0	−5 6 0	−15 12 0	−21 2 0
2. Poudrette 180 „	8 12 0	2	30	20	58	34	290	−10	−121	242	702	5 14 0	1 11 0	7 9 0	−8 12 0	−12 7 0	−21 3 0
3. Ashes of 180 maunds of cow dung and saltpetre 240lbs.	15 13 0	3	35	22	51	43	232	−8	−97	266	617	6 8 0	1 8 0	8 0 0	−15 13 0	−12 0 0	−27 13 0
4. Saltpetre 240lbs	10 5 0	4	...	...	12	...	...	...	...	...	145	...	0 6 0	0 6 0	−10 5 0	−19 10 0	−29 15 0
5. Saltpetre 240lbs and bone dust 360lbs...	13 10 0	5	...	...	20	...	...	...	...	...	242	...	0 9 0	0 9 0	−13 10 0	−19 7 0	−33 1 0
6. Cow dung 180 maunds	5 6 0	6	15	10	34	29	340	−20	−242	121	411	2 15 0	1 0 0	3 15 0	−5 6 0	−16 1 0	−21 7 0
7. Ditto and bone dust 360lbs,	8 10 0	7	45	30	47	64	157	...	...	363	568	8 14 0	1 6 0	10 4 0	−8 10 0	−9 12 0	−18 6 0
8. Ditto and gypsum 240lbs...	10 8 0	8	55	35	58	60	166	+5	+60	423	702	10 5 0	1 11 0	12 0 0	−10 8 0	−8 0 0	−18 8 0
9. Ashes of 100 maunds of dung ...	5 8 0	9	...	...	15	...	...	...	...	...	181	...	0 7 0	0 7 0	−5 8 0	−19 9 0	−25 1 0
10. Sheep dung 180 maunds and bone dust 360lbs.	8 10 0	10	...	...	22	...	...	...	...	...	266	...	0 10 0	0 10 0	−8 10 0	−19 6 0	−28 0 0
11. Saltpetre 240lbs and bone superphospate 240lbs.	20 0 0	11	...	...	17	...	...	...	...	...	206	...	0 8 0	0 8 0	−20 0 0	−19 8 0	−39 8 0
12. Sheep dung and gypsum 240lbs ...	10 8 0	12	35	22	45	49	205	−8	97	266	544	6 8 0	1 5 0	7 13 0	−10 8 0	−12 3 0	−22 11 0
13. No manure	...	13	45	30	55	55	183	...	...	363	665	8 14 0	1 10 0	10 8 0	...	−9 8 0	−9 8 0

Area of each plot is 400 square yards.

KHARIF STATEMENT No. III.—MISCELLANEOUS MANURE EXPERIMENT WITH MAIZE ("N" SERIES).

Quantity of manure applied per acre.	Value of manure.	Calculation of the result and comparison of outturn with the unmanured plot in the series.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.							
		1	2	3	4	5	6	7	8	9		10			11	12	13
		Number of plot as per map of Farm.	Weight of unthreshed cobs.	Weight of grain.	Weight of stalk.	Percentage of grain on stalk.	Percentage of stalk on grain.	Increase or decrease against unmanured plot.	Increase or decrease per acre.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 15.	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs. 20.	Net profit or loss over or against the assumed income, Rs. 20.
										Grain.	Stalk.	Grain @ Re. 1 per 41lbs.	Stalk @ Re. 1 per 410lbs.	Total.			
	Rs. a. p.		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. Woollen refuse 120 maunds and lime 12 maunds.	6 5 0	1	223	112	246	46	220	112	1,355	1,355	2,976	33 1 0	7 4 0	40 5 0	6 5 0	+20 5 0	+14 0 0
2. Sheep dung 120 maunds,	3 9 9	2	2	1½	16	9	1,066	1½	18	18	194	0 7 0	0 8 0	0 15 0	3 9 9	−19 1 0	−22 10 9
3. Cow dung 120 „ ...	3 9 6	3	2	1½	19	8	1,266	1½	18	18	230	0 7 0	0 9 0	1 0 0	3 9 6	−19 0 0	−22 9 6
4. Poudrette 120 „ ...	5 13 6	4	3	1	25	4	2,500	1	12	12	302	0 5 0	0 12 0	1 1 0	5 13 6	−18 15 0	−24 12 6
5. Horse dung 120 „ ...	3 9 6	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Pigs' dropping 120 „ ...	3 9 6	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Saltpetre 240 lbs. ...	10 5 0	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8. No manure ...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Area of each plot is 400 square yards.

KHARIF STATEMENT No. IV.—SOWING EXPERIMENT (MAIZE SOWN AFTER AMERICAN FASHION).

Detail of experiment.	Calculation of the result and comparison of outturn with the plot sown after country way.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.					
	1	2	3	4	5	6	7	8	9		10			11
									Actual outturn.		Value of outturn.			
	Number of plot as per map of Farm.	Weight of unthreshed cobs.	Weight of grain.	Weight of stalk.	Percentage of grain on stalk.	Percentage of stalk on grain.	Increase or decrease against unmanured plot.	Increase or decrease per acre.	Grain.	Stalk.	Grain @ Re. 1 per 41lbs.	Stalk @ Re. 1 per 410lbs.	Total.	Gain or loss per acre in the outturn against that of ordinary cultivation, assumed to be Rs. 20.
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Maize sown in ridges:—														
1 foot apart	26/B 1	215	150	329	46	219	+25	+100	600	1,316	14 10 0	3 3 0	17 13 0	−2 3 0
2 feet apart	26/B 2	145	104	197	53	189	−21	−84	416	788	10 2 0	1 15 0	12 1 0	−7 15 0
3 feet apart	26/B 3	105	75	170	44	227	−50	−200	300	680	7 5 0	1 11 0	9 0 0	−11 0 0
After country fashion... ...	4	220	125	299	42	239	...	...	500	1,196	12 3 0	2 15 0	15 2 0	−4 14 0

Area of each plot is 1,210 square yards.

KHARIF STATEMENT No. V.—EXPERIMENT IN EARLY AND LATE MAIZE SOWING.

Detail of experiment.	Calculation of the result and comparison of outturn with the plot sown after country way.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.					
	1	2	3	4	5	6	7	8	9		10			11
	Number of plot as per map of Farm.	Weight of unthreshed cobs.	Weight of grain.	Weight of stalks.	Percentage of grain on stalk.	Percentage of stalk on grain.	Increase or decrease against unmanured plots.	Increase or decrease per acre.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in outturn against that of ordinary cultivation assumed to be Rs. 20.
									Grain.	Stalk.	Grain at Re. 1 per 41lbs.	Stalk at Re 1 per 410lbs.	Total.	
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Sown (early) on the 15th of May ...	1	1,650	550	1,156	48	·210	+70	151	1,183	2,487	28 14 0	6 1 0	34 15 0	+14 15 0
Sown (late) on the 27th of June ...	2	1,470	480	1,098	44	229	...	...	1,033	2,362	25 3 0	5 12 0	30 15 0	+10 15 0

Area of each plot is 2,250 square yards.

KHARIF STATEMENT No. VI.—EXPERIMENT WITH DIFFERENT VARIETIES OF IMPORTED COTTON SEED.

		Actual outturn and comparison of outturn with plot No. 1 in each series.							Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.					
		1	2	3	4	5	6	7	8	9	10			11
		Number of plot as per map of Farm.	Weight of uncleaned cotton.	Weight of cleaned cotton.	Weight of seed.	Percentage of cotton on seed.	Percentage of seed on cotton.	Difference.	Difference per acre.	Actual outturn per acre.	Value of outturn.			Gain or loss per acre in outturn against that of ordinary cultivation assumed to be Rs. 45.
										Cotton.	Seed.	Cotton @ Re. 1 per 6lbs.	Seed @ Re. 1 per 61lbs.	Total.	
			lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
A.	1 Heengan Ghát ..	1	25	8	17	47	212	...	...	111	235	18 8 0	3 14 0	22 6 0	−22 10 0
	2 Upland Georgeon,	2	34	10	24	42	240	+2	28	138	332	23 0 0	5 7 0	28 7 0	−16 9 0
	3 Tree cotton ..	3	27	8	19	42	237	...	...	111	263	18 8 0	4 5 0	22 13 0	−22 3 0
	4 Louisiana ...	4	26	7	19	37	271	−1	14	97	263	16 3 0	4 5 0	20 8 0	−24 8 0
	5 Garro Hill ..	5	30	12	18	67	150	+4	55	166	249	27 11 0	4 1 0	31 12 0	−13 4 0
	6 Hybrid ...	6	21	6	15	40	250	−2	28	83	207	13 13 0	3 6 0	17 3 0	−27 13 0
	7 Seal sland ...	7	24	7	17	41	243	−1	14	97	235	16 3 0	3 14 0	20 1 0	−24 15 0
	8 Egyptian ...	8	23	7	16	44	229	−1	14	97	221	16 3 0	3 10 0	19 13 0	−25 3 0
B.	1 Jones' Improved,	9	3	1	2	50	200	−7	97	24	48	4 0 0	0 13 0	4 13 0	−40 3 0
	2 S. B. Mexey (Texas).	10	3	1	2	50	200	−7	97	24	48	4 0 0	0 13 0	4 13 0	−40 3 0
	3 Shines' Prolific,	11	3	1	2	50	200	−7	97	24	48	4 0 0	0 13 0	4 13 0	−40 3 0

Area of each plot up to plot No. 8 is 350 square yards, and after that 200 square yards.

KHARIF STATEMENT NO. VI.—EXPERIMENT IN EARLY AND LATE COTTON SOWING.

Detail of experiment.	Calculation of the result and comparison of outturn with the plot sown after rain.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.					
	1	2	3	4	5	6	7	8	9		10			11
	Number of plot as per map of the Farm.	Weight of uncleaned cotton.	Weight of cleaned cotton.	Weight of seed.	Percentage of cotton on seed.	Percentage of seed on cotton.	Difference.	Difference per acre.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in outturn against that of ordinary cultivation assumed to be Rs. 45.
									Cotton.	Seed.	Cotton @ Re. 1 per 6lbs.	Seed @ Re. 1 per 61lbs.	Total.	
	19	lbs.	lbs.	lbs.	lbs.	lbs.			lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Sown before rain ...	1	16	5	11	45	220	...	...	81	177	13 8 0	2 14 0	16 6 0	−28 10 0
Sown after rain ...	2						Nil.							

Area of each plot is 300 square yards.

KHARIF STATEMENT No. VII.—EXPERIMENT (1) IN THE YIELD OF DIFFERENT VARIETIES OF SUGARCANE, AND (2) IN NATIVE AND WEST INDIAN METHODS OF PLANTING.

Detail of experiment.	Calculation of the result and comparison of outturn with the standard plot in the series (the last plot).								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.				
									Outturn per acre.		Value of outturn.		Gain or loss per acre in the outturn against that of ordinary cultivation assumed to be Rs. 80.
	Area in square yards.	Weight of cane in lbs.	Weight of juice in lbs.	Weight of ráb or gur in lbs.	Percentage of juice over ráb.	Percentage of rab over juice.	Increase or decrease over indigenous way of sowing.	Increase or decrease per acre.	Juice.	Gur.	Gur @ Re. 1 per 22lbs.	Total.	
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Behea seed (Mongu or Dhaul).													
(1) Sown in lines	605	1,530	773	152	509	20	−52	−416	6,184	1,216	55 4 0	55 4 0	−24 12 0
(2) After indigenous way of sowing ...	605	1,862	940	177	531	19	−57	−456	7,520	1,416	64 6 0	64 6 0	−15 10 0
Sháhjahánpur seed (Dekehan).													
(1) Sown in lines	605	2,129	1,070	210	510	20	+6	+48	8,560	1,680	76 6 0	76 6 0	−3 10 0
(2) After indigenous way of sowing ...	605	2,299	1,154	230	502	20	−4	−32	9,232	1,840	83 10 0	83 10 0	+3 10 0
Moradabad seed (Barankha).													
(1) Sown in lines	605	1,841	923	180	516	19	−24	−192	7,424	1,440	65 7 0	65 7 0	−14 9 0
(2) After indigenous way of sowing ...	605	2,278	1,151	225	512	20	−9	−72	9,208	1,800	81 13 0	81 13 0	+1 13 0
Country Matna.													
(1) Sown in lines	605	2,024	1,027	204	508	20	−30	−240	8,216	1,632	74 3 0	74 3 0	−5 13 0
(2) After indigenous way of sowing ...	605	2,263	1,173	234	501	20	...	...	9,384	1,872	85 1 0	85 1 0	+5 1 0

KHARIF STATEMENT No. VIII.—EXPERIMENT TO DETERMINE THE ECONOMIC VALUE OF *PERI* (SECOND YEAR CANE-STOCKS).

Detail of experiment.	Calculation of the result and comparison of outturn with the standard plot in the series (the last plot).								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.						
	Area in square yards.	Weight of cane in lbs.	Weight of juice in lbs.	Weight of ráb or gur in lbs.	Percentage of juice over ráb.	Percentage of ráb over juice.	Increase or decrease over indigenous way of sowing.	Increase or decrease per acre.	Outturn per acre.		Value of outturn.		Total cost per acre of maintaining the *peri* (aftermath) crop.	Total cost per acre of raising a new crop.	Net gain per acre in the cost of cultivation.
									Juice.	Ráb.	Gur at Re. 1 per 22 lbs.	Total.			
	sq. yds.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Peri of Moradabad seed (Barankha).															
1. Sown in lines...	900	2,591	1,209	229	528	19	+15	+81	6,502	1,232	56 0 0	56 0 0			
2. Native method of sowing ...	900	2,773	1,314	250	526	19	−8	−43	7,066	1,344	61 1 0	61 1 0			
Bekea seed (Mongu or Dhaul).															
1. Sown in lines...	900	1,290	640	115	557	18	−99	−532	3,442	618	28 1 0	28 1 0			
2. Native method of sowing ...	900	1,036	829	162	512	20	−96	−516	4,458	871	39 9 0	39 9 0	33 0 0	56 0 0	23 0 0
Indigenous seed (Matna).															
1. Sown in lines...	900	2,200	1,171	214	547	18	−44	−237	6,297	1,151	52 5 0	52 5 0			
2. Native method of sowing ...	900	2,755	1,379	258	534	19	...	...	7,416	1,387	63 1 0	63 1 0			

KHARIF STATEMENT No. IX.—DETERMINATION OF THE EFFECT OF GYPSUM ON INDIGO.

Number of plot and area.	Special treatment.	Cost of special treatment.	Weight of green crop sold.	Actual outturn per acre.	Value of outturn per acre at Re 1 per 307lbs.	Increase or decrease against the unmanured plot.	
						In weight.	In money after deducting the cost of manure.
		Rs a. p.	lbs.	lbs.	Rs. a. p.	lbs.	Rs. a. p
1. 1,600 square yards	Gypsum applied as manure 3 cwt. and ploughed in as manure.	3 0 0	2,542	7,690	25 0 0	+1,737	+3 0 0
2. 1,600 „	Top dressed with gypsum when plant 6 inches high ...	3 0 0	2,214	6,697	22 0 0	+744	...
3. 1,600 „	No manure	...	1,968	5,953	19 0 0	...	...

KHARIF STATEMENT No. X.—EXPERIMENT (1) IN EARLY AND LATE INDIGO SOWING, (2) WITH GYPSUM AS A MANURE

Number of plot and area.	When sown.	Cost of the special treatment per acre.	Weight of green crop sold.	Outturn per acre	Value per acre at 307lbs per rupee
		Rs. a. p.	lbs.	lbs	Rs a p
(1) 1,815 square yards	Before rain	*4 2 0	676	1,803	5 14 0
(2) 1,815 „	After rain	.	...	..	...
(1) 1,815 „	Before rain	†3 10 0	922	2,459	8 0 0
(2) 1,815 „	After rain	...	...	..	...

* Cost of watering and of farmyard manure @ 200 maunds per acre.

† Ditto and of gypsum 1 cwt. per acre.

KHARIF STATEMENT No. XI.—EXPERIMENT IN OUTTURN OF MISCELLANEOUS KHARIF CROPS.

Detail of experiment.	1	2	3	4	5	6	7		8			9
	Area of each plot.	Weight of unthreshed crop.	Weight of grain.	Weight of stalk.	Percentage of grain on stalk.	Percentage of stalk on grain.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in outturn against that of ordinary cultivation assumed to be Rs. 20.
							Grain.	Stalk.	Grain @ Re. 1 per 41lbs.	Stalk @ Re. 1 per 410lbs.	Total.	
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. Cotton and arhar	...	...	...	...	...	...	...	...	...	...	...	...
2. Jowár for chari	400 sq. yds.	512	...	512	...	...	...	6,195	...	15 2 0	15 2 0	−4 14 0
3. Urd	„	41	6	35	17	583	73	423	1 12 0	1 1 0	2 13 0	−17 8 0
4. Moong	„	50	10	40	25	400	121	484	2 15 0	1 3 0	4 2 0	−15 14 0
5. Moth	„	146	66	80	82	121	799	968	19 8 0	2 6 0	21 14 0	+1 14 0
6. Lobia	„	125	26	99	26	381	315	1,198	7 11 0	2 15 0	10 10 0	−9 6 0
7. Bájra and arhar	„	226	8	218	4	2,725	97	2,638	2 6 0	6 7 0	8 13 0	−11 3 0
8. Bájra alone	„	334	10	324	3	3,240	121	3,920	2 15 0	9 9 0	12 8 0	−7 8 0
9. Jowar alone	„	523	35	488	7	1,394	423	5,905	10 5 0	14 6 0	24 11 0	+4 11 0
10. Jowár and arhar	„	447	30	417	7	1,390	363	5,046	8 14 0	12 5 0	21 3 0	+1 3 0
11. Til	„	57	7	50	14	714	85	605	2 1 0	1 8 0	3 9 0	−16 7 0
12. Arhar	„	126	36	90	40	250	436	1,089	10 10 0	2 10 0	13 4 0	−6 12 0
13. Hemp	„	136	24	112	21	467	290	1,355	7 1 0	3 5 0	10 6 0	−9 10 0
14. Kodon	„	77	17	60	28	353	206	726	5 0 0	1 12 0	6 12 0	−13 4 0
15. Mirwa	„	...	...	...	...	...	...	...	...	...	...	...
16. Kurthi	„	304	142	162	88	114	1,718	1,960	41 14 0	4 12 0	46 10 0	+26 10 0
17. Castor seed	„	...	...	...	...	...	...	...	...	...	...	...

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RABI STATEMENT No. I.—STANDARD SERIES, MANURE EXPERIMENT WITH WHEAT.

Calculation of the result and comparison of outturn with standard plot (No. 11) in the series.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country								
1	2	3	4	5	6	7	8	9		10			11	12	13	
Detail of special treatment with the rate of its cost.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot in the series.	Increase or decrease per acre.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs 30.	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs. 38	Net profit or loss over or against the assumed income, Rs. 38	
								Grain.	Straw.	Grain at Re 1 per 41lbs.	Straw at Re. 1 per 400lbs.	Total.				
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs	lbs.	lbs	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs a. p	Rs. a. p	Rs. a. p.	
1 Saltpetre 240lbs. per acre at Rs 3-8-0 per 82lbs,	296	94	192	49	204	+21	+252	1,137	2,323	35 8 0	11 10 0	47 2 0	−7 5 0	+9 2 0	+1 13 0	
2 Saltpetre 240lbs. per acre and bone dust 360lbs. per acre at 11 annas per 82lbs.	323	100	223	45	223	+27	+127	1,210	2,698	39 11 0	13 8 0	53 3 0	−10 10 0	+15 3 0	+4 9 0	
3 Cow dung 180 maunds per acre at Rs 3 per 100 maunds.	275	81	194	42	239	+8	+97	980	2,347	30 10 0	11 12 0	42 6 0	−2 6 0	+4 6 0	+2 0 0	
4 Cow dung 180 maunds per acre and bone dust 360lbs. per acre at 11 annas per 82lbs.	310	102	208	49	204	+29	+351	1,234	2,517	38 9 0	12 9 0	51 2 0	−5 11 0	+13 2 2	+7 7 0	
5 Cow dung 180 maunds per acre and gypsum 240lbs. per acre at Re. 1-12-0 per 82lbs.	304	97	207	47	213	+24	+290	1,174	2,505	36 11 0	12 8 0	49 3 0	−7 8 0	+11 3 0	+3 11 0	
6 Ashes of 180 maunds of cow dung at Rs. 3 per 100 maunds.	209	69	140	49	203	−4	−48	835	1,694	26 1 0	8 8 0	34 9 0	−2 6 0	−3 7 0	−5 13 0	
7 Sheep dung 180 maunds per acre at Rs. 3 per 100 maunds and bone-dust 360lbs. per acre at 11 annas per 82lbs.	278	80	198	40	247	+7	+85	968	2,396	30 4 0	12 0 0	42 4 0	−2 8 0	+4 4 0	+1 12 0	
8 Saltpetre 240lbs. per acre at Rs. 3-8-0 per 82lbs. and bone superphosphate 240lbs. per acre at Rs. 4-8-0 per 112lbs.	193	61	132	46	216	−12	−145	738	1,597	23 1 0	8 0 0	31 1 0	−5 11 0	−6 15 0	−12 10 0	
9 Sheep dung 180 maunds at Rs. 3 per 100 maunds and gypsum 240lbs. per acre at Re. 1-12-0 per 82lbs.	315	104	211	49	23	+31	+375	1,258	2,553	39 5 0	12 12 0	52 1 0	−17 0 0	+14 1 0	−2 15 0	
10 Sheep dung 180 maunds at Rs. 3 per 100 maunds.	237	84	153	55	182	+11	+133	1,016	1,851	31 12 0	9 4 0	41 0 0	−7 8 0	+3 0 0	−4 8 0	
11 No manure	267	73	194	37	266	...	..	883	2 347	27 9 0	11 12 0	39 5 0	+3 0 0	+1 5 0	+4 5 0	
12 Poudrette 180 maunds per acre at Rs. 4 per 100 maunds.	322	102	220	46	216	+29	+351	1,234	2,662	38 9 0	13 5 0	51 14 0	−5 12 0	+13 14 0	+8 2 0	
13 Ashes of 180 maunds of cow dung at Rs. 3 per 100 maunds and saltpetre 240lbs per acre at Rs. 3-8-0 per 82lbs.	203	70	133	53	190	−3	−36	847	1,609	26 7 0	8 1 0	34 8 0	−12 13 0	−3 8 0	−16 5 0	

Area of each plot 400 square yards.

RABI STATEMENT No. II.—DUPLICATE SERIES; MANURE EXPERIMENT WITH WHEAT.

Calculation of the result and comparison of outturn with standard plot (No. 11) in the series.									Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.							
1	2	3	4	5	6	7	8	9	10		11			12	13	14
Serial number.	Detail of special treatment with the rate of its cost.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot in the series.	Increase or decrease per acre.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 30.	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs. 38.	Net profit or loss over or against the assumed income, Rs. 38.
									Grain.	Straw.	Grain at Re. 1 per 41lbs.	Straw at Re. 1 per 400lbs.	Total.			
		lbs.	lbs.	lbs.	lb.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Saltpetre 240lbs. per acre at Rs. 3-8-0 per 82lbs. ...	248	71	177	40	249	+20	+242	859	2,142	26 13 0	10 11 0	38 8 0	−7 5 0	+0 8 0	−6 13 0
2	Ditto ditto and bone dust 360lbs. per acre at 11 annas per 82lbs.	212	70	142	49	203	+19	+230	847	1,718	25 13 0	8 9 0	34 6 0	−10 10 0	−3 10 0	−14 4 0
3	Cow dung 180 maunds per acre at Rs. 3 per 100 maunds...	253	82	171	48	209	+31	+375	992	2,069	31 0 0	10 6 0	41 6 0	−2 6 0	+3 6 0	+1 0 0
4	Ditto ditto and bone dust 360lbs. per acre at 11 annas per 82lbs.	230	72	158	46	219	+21	+254	871	1,912	27 0 0	9 9 0	36 9 0	−5 11 0	−1 7 0	−7 2 0
5	Cow dung 180 maunds per acre and gypsum 240lbs. per acre at Re. 1-12-0 per 82lbs.	267	78	189	41	242	+28	+339	944	2,287	29 8 0	11 6 0	40 14 0	−7 8 0	+2 14 0	−4 10 0
6	Ashes of 180 maunds of cow dung at Rs. 3 per 100 maunds,	218	67	151	44	225	+16	+194	811	1,827	25 5 0	9 2 0	34 7 0	−2 8 0	−3 9 0	−6 1 0
7	Sheep dung 180 maunds per acre at Rs. 3 per 100 maunds and bone dust 360lbs. per acre at 11 annas per 82lbs.	273	83	190	44	229	+32	+387	1,004	2,299	31 6 0	11 8 0	42 14 0	−5 11 0	+4 14 0	−0 13 0
8	Saltpetre 240lbs. per acre at Rs. 3-8-0 per 82lbs. and bone superphosphate 240lbs. per acre at Rs. 4-8-0 per 112lbs.	212	66	146	45	221	+15	+181	799	1,767	24 15 0	8 13 0	33 12 0	−17 0 0	−4 4 0	−21 4 0
9	Sheep dung 180 maunds at Rs. 3 per 100 maunds and gypsum 240lbs. per acre at Re. 1-12-0 per 82lbs.	391	131	260	50	198	+81	+980	1,585	3,146	49 8 0	15 12 0	65 4 0	−7 8 0	+3 0 0	−4 8 0
10	Sheep dung 180 maunds at Rs. 3 per 100 maunds ..	283	93	190	79	204	+42	+508	1,125	2,299	25 2 0	11 8 0	36 10 0	+2 6 0	−1 6 0	+1 0 0
11	No manure	154	51	103	50	202	...	...	617	1,240	19 4 0	6 4 0	25 8 0	+3 0 0	−12 8 0	−9 8 0
12	Poudrette 180 maunds per acre at Rs. 4 per 100 maunds ...	414	136	278	49	204	+85	+1,028	1,646	3,364	51 7 0	16 13 0	68 4 0	−5 12 0	+30 4 0	+24 8 0
13	Ashes of 180 maunds of cow dung at Rs. 3 per 100 maunds and saltpetre 240lbs. per acre at Rs. 3-8-0 per 82lbs.	229	72	157	46	218	+21	+254	871	1,900	27 3 0	9 8 0	36 11 0	−12 13 0	−1 5 0	−14 2 0

Area of each plot 400 square yards.

RABI STATEMENT No. III.—GREEN MANURES (WHEAT) SERIES.

	Calculation of the result and comparison of outturn with the standard plot (No. 12) in the series.							Comparison of cost and income with the ordinary kind of cultivation in vogue in this country								
	1	2	3	4	5	6	7	8		9			10	11	12	
	Weight of unthreshed sheaves.	Weight of grain	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot in the series.	Increase or decrease per acre.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 30.	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs. 38.	Net profit or loss over or against the assumed income, Rs. 38.	
								Grain.	Straw.	Grain at Re. 1 per 32lbs.	Straw at Re 1 per 200lbs.	Total.				
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1. Old indigo refuse 120 maunds at Re. 1 per 100 maunds per acre.	320	107	213	50	199	+53	+641	1,295	2,577	50 7 0	12 14 0	53 5 0	−1 12 0	+15 5 0	+14 9 0	
2. Fresh indigo refuse 120 maunds at Re. 1 per 100 maunds and lime 6 maunds.	322	118	204	58	173	+64	+774	1,428	2,468	44 10 0	12 5 0	56 15 0	−3 8 0	+18 15 0	+15 7 0	
3. Indigo water 3,600 cubic feet per acre at Re. 1 per 1,200 cubic feet.	197	60	137	44	228	+6	+73	726	1,658	22 11 0	8 5 0	31 0 0	−34 0 0	−7 0 0	−41 0 0	
4. Hemp water 3,600 cubic feet per acre at Re. 1 per 1,200 cubic feet.	190	61	129	47	212	+7	+85	738	1,561	23 1 0	7 13 0	30 14 0	−15 8 0	−8 0 0	−23 8 0	
5. No manure	167	54	113	48	209	...	...	653	1,367	20 6 0	6 13 0	27 3 0	+3 0 0	−10 13 0	−7 13 0	
6. After hemp crop	223	73	150	49	205	+26	+315	883	1,815	27 9 0	9 1 0	36 10 0	+3 0 0	−2 6 0	−5 6 0	
7. Green manure with hemp at Rs. 3-8-0 per acre.	248	85	163	52	192	+38	+460	1,028	1,552	32 2 0	7 12 0	39 14 0	+0 4 0	+1 14 0	+1 10 0	
8. Green manure with indigo at Rs. 8 per acre.	206	59	147	40	249	+12	+145	714	1,779	22 6 4	8 14 0	31 4 0	−0 4 0	−7 12 0	−8 0 0	
9. After indigo crop	232	69	163	42	236	+22	+266	835	1,972	26 1 0	9 14 0	35 15 0	+1 8 0	−2 1 0	−3 9 0	
10. Green indigo ploughed as manure at Re. 1-12-0 per 82lbs. per acre with 6 maunds gypsum.	203	63	140	45	222	+16	+194	762	1,694	23 13 0	8 8 0	32 5 0	−10 7 0	−5 11 0	−16 2 0	
11. Green hemp ploughed as manure at Re. 1-12-0 per 82lbs. per acre with 6 maunds gypsum.	214	69	145	48	210	+22	+266	835	1,754	26 1 0	8 12 0	34 13 0	−10 12 0	−3 3 0	−13 15 0	
12. No manure	159	47	112	42	238	...	...	569	1,355	17 12 0	6 12 0	24 8 0	+3 0 0	−13 8 0	−16 8 0	
13. Alternate with lucerne	227	75	152	49	203	+28	+339	907	629	28 5 0	3 2 0	31 7 0	+3 0 0	−6 9 0	−9 9 0	

Area of each plot is 400 square yards.

RABI STATEMENT No. IV.—GREEN MANURE EXPERIMENT WITH WHEAT.

	Calculation of the result and comparison of outturn with the standard plot Nos. 5 and 2 respectively in A and B in the series.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.							
		1	2	3	4	5	6	7	8	9	10			11	12	13
		Number of plots as per map of Farm.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot in the series (Nos. 5 and 2.)	Increase or decrease per acre.	Actual outturn per acre.	Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 30.	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs. 38.	Net profit or loss over or against the assumed income, Rs. 38.
										Grain.	Straw.	Grain at Re. 1 per 32lbs.	Straw at Re. 1 per 200lbs.	Total.			
			lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
A.	Fresh indigo refuse 120 maunds and lime 6 maunds per acre at Re. 1 per 100 maunds and Rs. 20 per 100 maunds, respectively.	* 1	660	181	479	38	265	+96	+581	1,095	2,898	34 3 0	14 8 0	48 11 0	−3 8 0	+10 11 0	+7 3 0
A.	Fresh indigo refuse 120 maunds at Re. 1 per 100 maunds.	2	444	117	327	36	279	+32	+194	708	1,978	22 2 0	9 14 0	32 0 0	−1 12 0	−6 0 0	−7 12 0
A.	Old indigo refuse 120 maunds and lime 6 maunds per acre at Re. 1 per 100 maunds and Rs. 20 per 100 maunds, respectively.	3	543	154	389	40	253	+69	+417	931	2,353	29 1 0	11 12 0	40 13 0	−3 8 0	+2 13 0	−0 11 0
A.	Old indigo refuse 120 maunds at Re. 1 per 100 maunds.	4	462	135	327	41	242	+50	+302	817	1,978	25 9 0	9 14 0	35 7 0	−1 12 0	−2 9 0	−4 5 0
A.	No manure (average of 2 plots) ...	5	305	85	220	39	259	...	...	514	1,331	16 1 0	6 10 0	22 11 0	+3 0 0	−15 5 0	−18 5 0
B.	Hemp ploughed in (average of 7† plots)	1	475	128	347	37	271	+61	+338	814	2,207	25 7 0	11 1 0	36 8 0	−0 4 0	−1 8 0	−1 12 0
B.	No manure (average 6 plots) ...	2	239	67	172	39	257	...	...	447	1,010	13 15 0	5 1 0	19 0 0	+3 0 0	−19 0 0	−16 0 0

* Area of each plot 800 square yards.

† The area of the plots is different, but the average of a manured plot is 761 square yards and of an unmanured one is 726 square yards.

WHEAT.

RABI STATEMENT NO. V.—MISCELLANEOUS MANURES SERIES.

	Calculation of the result and comparison of outturn with the standard plot No. 8 in the series.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.							
	1	2	3	4	5	6	7	8	9		10			11	12	13
	Number of plots as per map of Farm.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot (No. 8) in the series.	Increase or decrease per acre.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 30.	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs. 38.	Net profit or loss over or against the assumed income, Rs. 38.
									Grain.	Straw.	Grain at Re. 1 per 32lbs.	Straw at Re. 1 per 200lb.	Total.			
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs, a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brick kiln refuse 120 maunds at Re. 1-12-0 per acre.	1	170	53	117	45	221	+4	+48	641	1,416	20 0 0	7 1 0	27 1 0	+1 4 0	−10 15 0	−12 3 0
Silt 300 maunds at annas 4 per 100 maunds per acre.	2	186	57	129	44	226	+8	+97	690	1,561	21 8 0	7 9 0	29 1 0	+2 4 0	−8 15 0	−11 3 0
Compost 200 maunds at Rs. 3 per 100 maunds per acre.	3	221	69	152	45	220	+20	+242	835	1,839	26 1 0	9 2 0	35 3 0	−3 0 0	−2 13 0	−5 13 0
Road scrapings 300 maunds = Rs. 4-11-0 per acre.	4	201	61	140	44	230	+12	+145	738	1,694	23 1 0	8 8 0	31 9 0	−1 11 0	−6 7 0	−8 2 0
Ashes of 120 maunds weeds = Rs. 4 per acre.	5	151	46	105	44	228	−3	−36	557	1,270	17 6 0	6 6 0	23 12 0	−1 0 0	−14 4 0	−15 4 0
Ashes of saltpetre 240lbs. = Rs. 3-8-0 per acre.	6	281	85	196	43	231	+36	+436	1,028	2,372	32 2 0	11 14 0	44 0 0	−11 3 0	+6 0 0	−5 3 0
Ammonia chloride 240lbs. = Rs. 15 per acre.	7	163	46	117	39	254	−3	−36	557	1,416	17 6 0	7 1 0	24 7 0	−41 0 0	−13 9 0	−54 9 0
No manure	8	175	49	126	39	257	...	...	593	1,561	18 8 0	7 9 0	26 1 0	+3 0 0	−11 15 0	−14 15 0

Area of each plot 400 square yards.

RABI STATEMENT No. VI.—PLOUGHING EXPERIMENT WITH WHEAT.

Ploughing series.		Calculation of the result and comparison of the outturn with standard plot Nos. 4 and 7 in the series A and B.								Comparison of cost and income with ordinary kind of cultivation in vogue in this country.								
		1	2	3	4	5	6	7	8	9		10			11	12	13	
		Number of plots as per map of Farm.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot in the series.	Increase or decrease per acre.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 30.	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs. 38.	Net profit or loss over or against the assumed income, Rs. 38.	
										Grain.	Straw.	Grain at Re. 1 per 41lbs.	Straw at Re. 1 per 400lbs.	Total.				
			lbs.	lbs.	lbs.	lbs.	lbs	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
A.	Ploughed 5" deep (four times) at annas 12 per ploughing.	1	153	51	102	50	200	+7	+113	823	1,646	25 11 0	8 4 0	33 15 0	+1 8 0	−4 1 0	−2 9 0	
	Ploughed 3" deep (six times) with country plough at 12 annas per ploughing.	2	132	44	88	50	200	...	...	710	1,420	22 3 0	7 2 0	29 5 0	...	−8 11 0	−8 11 0	
	Ploughed 9" deep (four times) at 12 annas per ploughing.	3	179	61	118	52	193	−15	+242	984	1,904	30 12 0	9 8 0	40 4 0	+3 0 0	+2 4 0	+5 4 0	
	Ploughed 3" deep (eight times) with country plough at 12 annas per ploughing.	4	139	46	93	49	215	...	...	742	1,500	23 3 0	7 8 0	30 11 0	...	−7 5 0	−7 5 0	
B.	Ploughed 9" deep (four times (at 12 annas per ploughing.	5	1,505	367	1,138	32	310	−3	−6	725	2,248	22 10 0	11 4 0	33 14 0	+3 0 0	−4 2 0	−1 2 0	
	Ploughed 5" deep (four times) at 12 annas per ploughing.	6	1,501	426	1,075	40	252	−56	−111	842	2,124	26 5 0	10 10 0	36 15 0	+3 0 0	−1 1 0	+1 15 0	
	Ploughed 3" deep (eight times) with country plough at 12 annas per ploughing.	7	1,500	370	1,130	33	305	...	...	731	2,237	22 13 0	11 3 0	34 0 0	...	−4 0 0	−4 0 0	

The difference of the cost of ploughing for eight times at annas 12 each time = Rs. 6, is shown in column 12.

Area of each plot (Nos. 1 to 4) 300 square yards.

" " (Nos. 5 to 7) 2,450 " "

WHEAT.

RABI STATEMENT NO. V.—MISCELLANEOUS MANURES SERIES.

	Calculation of the result and comparison of outturn with the standard plot No. 8 in the series.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.							
	1	2	3	4	5	6	7	8	9		10			11	12	13
	Number of plots as per map of Farm.	Weight of unthreshed sheaves.	Weight of grain	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot (No. 8) in the series.	Increase or decrease per acre	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 30.	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs. 38	Net profit or loss over or against the assumed income, Rs. 38.
									Grain	Straw	Grain at Re 1 per 32lbs.	Straw at Re 1 per 200lb.	Total.			
		lbs.	lbs.	lbs.	lbs	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p	Rs. a. p.	Rs. a p	Rs. a. p.
Brick kiln refuse 120 maunds at Re 1-12 0 per acre	1	170	53	117	45	221	+4	+48	641	1,416	20 0 0	7 1 0	27 1 0	+1 4 0	−10 15 0	−12 3 0
Silt 300 maunds at annas 4 per 100 maunds per acre.	2	186	57	129	44	226	+8	+97	690	1,561	21 8 0	7 9 0	29 1 0	+2 4 0	−8 15 0	−11 3 0
Compost 200 maunds at Rs. 3 per 100 maunds per acre.	3	221	69	152	45	220	+20	+242	835	1,839	26 1 0	9 2 0	35 3 0	−3 0 0	−2 13 0	−5 13 0
Road scrapings 300 maunds = Rs. 4-11-0 per acre.	4	201	61	140	44	230	+12	+145	738	1,694	23 1 0	8 8 0	31 9 0	−1 11 0	−6 7 0	−8 2 0
Ashes of 120 maunds weeds = Rs. 4 per acre.	5	151	46	105	44	228	−3	−36	557	1,270	17 6 0	6 6 0	23 12 0	−1 0 0	−14 4 0	−15 4 0
Ashes of saltpetre 240lbs = Rs. 3-8-0 per acre.	6	281	85	196	43	231	+36	+436	1,028	2,372	32 2 0	11 14 0	44 0 0	−11 3 0	+6 0 0	−5 3 0
Ammonia chloride 240lbs. = Rs. 15 per acre.	7	163	46	117	39	254	−3	−36	557	1,416	17 6 0	7 1 0	24 7 0	−41 0 0	−13 9 0	−54 9 0
No manure	8	175	49	126	39	257	...	...	593	1,561	18 8 0	7 9 0	26 1 0	+3 0 0	−11 15 0	−14 15 0

Area of each plot 400 square yards.

RABI STATEMENT No. VI.—PLOUGHING EXPERIMENT WITH WHEAT.

Ploughing series.		Calculation of the result and comparison of the outturn with standard plot Nos. 4 and 7 in the series A and B.								Comparison of cost and income with ordinary kind of cultivation in vogue in this country.								
		1	2	3	4	5	6	7	8	9		10			11	12	13	
		Number of plots as per map of Farm.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot in the series.	Increase or decrease per acre.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 30.	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs. 38.	Net profit or loss over or against the assumed income, Rs. 38.	
										Grain.	Straw.	Grain at Re. 1 per 41lbs.	Straw at Re. 1 per 400lbs.	Total.				
			lbs.	lbs.	lbs.	lbs.	lbs	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
A.	Ploughed 5" deep (four times) at annas 12 per ploughing.	1	153	51	102	50	200	+7	+113	823	1,646	25 11 0	8 4 0	33 15 0	+1 8 0	−4 1 0	−2 9 0	
	Ploughed 3" deep (six times) with country plough at 12 annas per ploughing.	2	132	44	88	50	200	...	...	710	1,420	22 3 0	7 2 0	29 5 0	...	−8 11 0	−8 11 0	
	Ploughed 9" deep (four times) at 12 annas per ploughing.	3	179	61	118	52	193	−15	+242	984	1,904	30 12 0	9 8 0	40 4 0	+3 0 0	+2 4 0	+5 4 0	
	Ploughed 3" deep (eight times) with country plough at 12 annas per ploughing.	4	139	46	93	49	215	...	...	742	1,500	23 3 0	7 8 0	30 11 0	...	−7 5 0	−7 5 0	
B.	Ploughed 9" deep (four times (at 12 annas per ploughing.	5	1,505	367	1,138	32	310	−3	−6	725	2,248	22 10 0	11 4 0	33 14 0	+3 0 0	−4 2 0	−1 2 0	
	Ploughed 5" deep (four times) at 12 annas per ploughing.	6	1,501	426	1,075	40	252	−56	−111	842	2,124	26 5 0	10 10 0	36 15 0	+3 0 0	−1 1 0	+1 15 0	
	Ploughed 3" deep (eight times) with country plough at 12 annas per ploughing.	7	1,500	370	1,130	33	305	...	...	731	2,237	22 13 0	11 3 0	34 0 0	...	−4 0 0	−4 0 0	

The difference of the cost of ploughing for eight times at annas 12 each time = Rs. 6, is shown in column 12.

Area of each plot (Nos. 1 to 4) 300 square yards.

" " (Nos. 5 to 7) 2,450 " "

RABI STATEMENT No. VII.—MANURE EXPERIMENT WITH COTTON SEED CAKE AND COW DUNG (WHEAT SOWN).

	Detail of special manures applied	Calculation of the result and comparison of outturn with the standard plot Nos 6 and 6 in the series A and B								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country								
		1	2	3	4	5	6	7	8	9		10				11	12	13
		Number of plots as per map of Farm.	Weight of unthreshed sheaves	Weight of grain	Weight of straw	Percentage of grain on straw	Percentage of straw on grain	Increase or decrease over standard plot in the series	Increase or decrease per acre	Actual outturn per acre		Value of outturn				Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 30.	Gain or loss per acre in the value of outturn against ordinary cultivation as assumed to be Rs 38	Net profit or loss over or against the assumed income, Rs 38
										Grain	Straw	Grain at Re 1 per 32lbs	Straw at Re 1 per 2000lbs	Total.				
			lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	Rs. a. p	Rs a p	Rs a p		Rs a p	Rs. a. p	Rs a p
A.	Cotton seed fed dung, 50 maunds per acre at Rs 4 per 100 maunds	1	422	124	298	42	240	−14	−111	981	2,367	30 10 0	11 13 0	42 7 0		+1 0 0	+4 7 0	+5 7 0
	Ditto ditto 100 maunds per acre at Rs 4 per 100 maunds	2	417	132	285	46	216	−6	−47	1,044	2,254	32 10 0	11 4 0	44 5 0		−1 0 0	+6 5 0	+5 5 0
	Cow dung 200 maunds at Rs 3 per 100 maunds per acre	3	539	148	391	38	264	+10	+79	1,170	3,109	36 9 0	15 9 0	52 2 0		−3 0 0	+14 2 0	+11 2 0
	Perished cotton seed 5 maunds at Re. 1 per 30 seers per acre	4	498	140	358	39	256	+2	+16	1,107	2,831	34 9 0	14 9 0	49 2 0		−3 15 0	+11 2 0	+7 3 0
	Ditto ditto 10 maunds at Re 1 per 30 seers per acre	5	566	162	404	40	249	+24	+190	1,281	3,260	40 0 0	16 5 0	56 5 0		−10 14 0	+18 5 0	+7 7 0
	No special manure	6	530	138	392	35	284	...	...	1,091	3,103	34 1 0	15 8 0	49 9 0		+3 0 0	+11 9 0	+14 9 0
B.	Mustard cake 5 maunds per acre at Re 1 per 30 seers	1	504	154	350	44	227	+33	+220	1,027	2,393	32 1 0	11 11 0	43 12 0		−5 1 0	+5 12 0	+0 11 0
	Ditto 10 maunds per acre at Re 1 per 30 seers	2	633	189	444	43	235	+68	+453	1,260	2,960	39 6 0	14 13 0	54 3 0		−13 1 0	+16 3 0	+3 2 0
	Plain cow dung 200 maunds per acre at Rs 3 per 100 maunds	3	601	183	418	44	229	+62	+413	1,220	2,787	38 2 0	13 15 0	52 1 0		−3 0 0	+14 1 0	+11 1 0
	Cake fed dung 50 maunds per acre at Rs 4 per 100 maunds	4	523	134	389	34	290	+13	+87	893	2,593	27 14 0	12 15 0	40 13 0		+1 0 0	+2 13 0	+3 13 0
	Ditto 100 maunds per acre at Rs 4 per 100 maunds	5	464	122	342	36	280	+1	+7	813	2,280	25 6 0	11 3 0	36 9 0		−1 0 0	−1 7 0	−0 7 0
	No special manure ..	6	467	121	346	35	286			807	2,307	25 3 0	11 9 0	36 12 0		+3 0 0	[illegible] 0	+1 12 0

A. Area of each plot 612 square yards.
B Ditto 726 ditto

RABI STATEMENT No. VIII.—EXPERIMENT AS TO THE RESIDUAL VALUE OF VARIOUS MANURES (WHEAT SOWN).

		Calculation of the result and comparison of outturn with the standard plot No. 6 and 10 in the series A and B.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.				
		1	2	3	4	5	6	7	8	9		10		
										Actual outturn per acre.		Value of outturn.		
		Number of plots as per map of Farm.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot in the series.	Increase or decrease per acre.	Grain.	Straw.	Grain at Re. 1 per 41lbs.	Straw at Re. 1 per 400lbs.	Total.
			lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
A.	Calcic superphosphate 180lbs., ammonic chloride 130 lbs., potassic sulphate 90lbs., calcic sulphate 96lbs., per acre.	1	89	27	62	44	229	+2	+48	653	1,500	20 6 0	7 8 0	27 14 0
	Ditto except calcic superphosphate ...	2	79	24	55	44	229	−1	−24	581	1,331	18 2 0	6 10 0	24 12 0
	Ditto except ammonic chloride ...	3	84	26	58	45	223	+1	−24	629	1,404	19 10 0	7 2 0	26 12 0
	Ditto except potassic sulphate ...	4	84	28	56	50	200	+3	+73	678	1,355	21 3 0	6 12 0	27 15 0
	Ditto except calcic sulphate	5	65	21	44	48	210	−4	−97	508	1,065	15 14 0	5 5 0	21 3 0
	No manure	6	82	25	57	44	228	...	...	605	1,379	18 14 0	6 14 0	25 12 0
B.	Cowdung	1	321	85	236	36	278	+13	+157	1,028	2,856	32 2 0	14 4 0	46 6 0
	Poudrette	2	235	70	165	42	236	−2	−24	847	1,990	26 7 0	10 0 0	36 7 0
	Mustard cake	3	212	64	148	43	231	−8	−97	774	1,791	24 3 0	8 15 0	33 2 0
	Woollen refuse	4	216	56	160	35	286	−16	−194	678	1,936	21 3 0	9 11 0	33 14 0
	Cow dung and bone dust	5	215	59	156	38	264	−13	−157	714	1,888	22 5 0	9 7 0	31 12 0
	Compost	6	209	57	152	38	267	−15	−181	630	1,839	21 9 0	9 3 0	30 12 0
	Indigo ploughed	7	179	55	124	44	225	−17	−206	665	1,500	20 12 0	7 8 0	28 4 0
	Saltpetre	8	206	59	147	40	249	−13	−157	714	1,779	22 5 0	8 14 0	31 3 0
	Ammonic	9	210	58	152	38	262	−14	−169	702	1,839	21 12 0	9 3 0	30 15 0
	No manure	10	239	72	167	43	232	...	...	871	2,021	27 3 0	10 2 0	37 5 0

A. Each plot is of 200 square yards.
B. Ditto 605 ditto.

RABI STATEMENT No. IX.—EXPERIMENT WITH KAINIT ON WHEAT.

	Calculation of the result and comparison of outturn with the standard plot No 5 in the series.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country							
	1	2	3	4	5	6	7	8	9		10			11	12	13
	Number of plots as per map of Farm.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot in the series	Increase or decrease per acre	Actual outturn per acre		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs 30	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs 38.	Net profit or loss over or against the assumed income, Rs. 38.
									Grain.	Straw.	Grain @ Re 1 per 32lbs.	Straw @ Re 1 per 200 lbs.	Total.			
		lbs.	lbs	lbs	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs a. p	Rs a p	Rs. a. p	Rs a. p	Rs a. p	Rs a p
Kainit 3 cwt. per acre and green hemp ploughed.	1	251	88	193	46	219	+26	+315	1,065	2,335	33 4 0	11 11 0	44 15 0	−8 8 0	+6 15 0	−1 9 0
Hemp ploughed	2	242	80	162	49	202	+18	+218	968	1,960	30 4 0	9 13 0	40 1 0	−0 4 0	+2 1 0	+1 13 0
Farmyard manure 200 mds and kainit 3 cwt. per acre.	3	683	231	452	51	196	+169	+1,230	1,681	3,290	52 9 0	16 7 0	69 0 0	−11 4 0	+31 0 0	+19 12 0
Woollen refuse 200 mds and kainit 3 cwt. per acre.	4	779	249	530	47	213	+187	+1,361	1,812	3,857	56 10 0	19 5 0	75 15 0	−11 4 0	+37 15 0	+26 11 0
No manure	5	240	62	178	35	287	...	...	750	2,154	23 7 0	10 12 0	34 3 0	+3 0 0	−3 13 0	−0 13 0

1—400 square yards. 2—400 square yards. 3—665 square yards. 4—665 square yards. 5—400 square yards.

RABI STATEMENT No. X.

	Calculation of the result and comparison of outturn with the standard plot in the series								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.				
	1	2	3	4	5	6	7	8	9		10		
	Number of plots as per map of Farm.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot in the series.	Increase or decrease per acre.	Actual outturn per acre		Value of outturn.		
									Grain.	Straw.	Grain at Re. 1 per 32lbs.	Straw at Re 1 per 200lbs	Total.
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs	Rs. a. p.	Rs. a. p	Rs. a. p
Grazed by sheep when one foot high	1	180	42	138	30	329	−1	−24	1,016	3,340	31 12 0	16 11 0	48 7 0
Nibbled by sickle ditto	2	186	45	141	32	313	+2	+48	1,089	3,412	34 0 0	17 1 0	51 1 0
Left as it was	3	155	43	112	38	260	...	...	1,041	2,710	32 8 0	13 9 0	46 1 0

Each plot 200 square yards.

RABI STATEMENT No. XI.—EXPERIMENT IN METHODS OF SOWING (WHEAT).

	Calculation of the result and comparison of outturn with the standard plot No. 2 in the series.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.							
	1	2	3	4	5	6	7	8	9		10			11	12	13
	Number of plot as per map of Farm.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot in the series.	Increase or decrease per acre.	Actual outturn per acre.		Value of outturn.			Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 30.	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs. 38.	Net profit or loss over or against the assumed income, Rs. 38.
									Grain.	Straw.	Grain at Re. 1 per 41lbs.	Straw at Re. 1 per 400lbs.	Total.			
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Wheat ... Peas ... Lucerne ... Sown after Jethro Tull system.	1	570	215	355	61	165	—206	—515	537	887	16 12 0	4 7 0	21 3 0	*		
		65	40	25	...	...	...	...	...	...	1 0 0	0 4 0	1 4 0	—45 2 0	—16 3 0	—61 5 0
		40	...	...	...	...	...	...	...	...	...	1 0 0	1 0 0			
												Total ...	23 7 0			
Sown after country fashion ...	2	1,439	421	1,018	41	242	...	...	1,052	2,545	32 14 0	12 12 0	45 10 0	...	+7 10 0	...

* Cost of making strips per acre. (1) Making strips 43,560 cubic feet at Re. 1 per 1,000 cubic feet Rs. 43-8-0. (2) Labor of making lines and sowing Re. 1-10-0.

RABI STATEMENT No. XII.—EXPERIMENT WITH DIFFERENT VARIETIES OF WHEAT.

	Calculation of the result and comparison of outturn with the standard plot No. 5 in the series.								Comparison of cost and income with the ordinary kind of cultivation in vogue in this country.				
	1	2	3	4	5	6	7	8	9		10		
	Number of plot as per map of Farm.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Increase or decrease over standard plot in the series.	Increase or decrease per acre.	Actual outturn per acre.		Value of outturn.		
									Grain.	Straw.	Grain @ Re. 1 per 41lbs.	Straw @ Re. 1 per 400lbs.	Total.
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Adelaide	1	305	72	233	31	324	+7	+85	871	2,819	27 3 0	14 2 0	41 5 0
Muzaffarnagar	2	254	89	165	54	185	—10	—121	1,070	1,996	33 7 0	10 0 0	43 7 0
Sindhi	3	328	70	258	27	369	+9	+109	847	3,122	26 7 0	15 10 0	42 1 0
Buxar	4	215	58	157	37	271	+21	+254	702	1,900	21 15 0	9 8 0	31 7 0
Mundia	5	348	79	269	29	341	...	...	956	3,255	29 14 0	16 4 0	46 2 0

RABI STATEMENT No. XIII.—EXPERIMENT WITH BARLEY.

Number of plot.	Crops.	Weight of unthreshed sheaves.	Weight of grain.	Weight of straw.	Percentage of grain on straw.	Percentage of straw on grain.	Outturn per acre.	
							Grain.	Straw.
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1	Chocolate colored barley	1,060	348	712	49	205	1,547	3,164
2	White huskless barley	476	178	298	60	167	1,780	2,980
3	Green ditto	523	164	359	46	219	1,312	2,872
4	Country barley	1,205	395	810	49	205	1,974	4,050

RABI STATEMENT No. XIV.—EXPERIMENT WITH GYPSUM APPLIED TO PEAS AND GRAM.

Number of plot.	Crops.	Manure and quantity per acre.	Outturn per acre.		Increase due to gypsum.	
			Grain.	Straw.	Grain.	Straw.
			lbs.	lbs.	lbs.	lbs.
1	Peas	Farmyard manure 100 maunds, gypsum 3 cwt. P. A.	1,703	1,542	30	484
2	Do.	Ditto 100 maunds per acre	1,673	1,058		
3	Gram	Ditto 50 maunds, gypsum 3 cwt. P. A.	1,680	745	172	89
4	Do.	Ditto 100 maunds per acre	1,508	656		

RABI STATEMENT No. XV.—EXPERIMENT WITH POTATOES.

Number of plot.	Manure and quantity per acre.	Actual outturn.	Increase or decrease over standard plot No. 5 in the series.	Increase or decrease per acre.	Actual outturn per acre.	Potatoes at Re. 1 per 99lbs.	Gain or loss per acre in the cost against the cost of ordinary cultivation assumed to be Rs. 82.	Gain or loss per acre in the value of outturn against ordinary cultivation assumed to be Rs. 200.	Net profit or loss over or against the assumed income, Rs. 200.
		lbs.	lbs.	lbs.	lbs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Poudrette 200 mds. at Rs. 4 per 100 mds. and sulphate of iron ½ cwt. at Rs. 6-2-0 per cwt.	1,742	+748	+4,987	11,613	117 5 0	+6 15 0	−82 11 0	−75 12 0
2	Woollen refuse 200 mds. at Rs. 3 per 100 mds. and gypsum 3 cwt. at Rs. 2-6-0 per cwt.	1,640	+646	+4,307	+10,933	110 7 0	+4 14 0	−89 9 0	−84 11 0
3	Poudrette 200 mds. at Rs. 4 per 100 mds. and kainit 5 cwt. at Rs. 2-12-0 per cwt.	920	−74	−493	6,133	61 15 0	−3 12 0	−138 1 0	−141 13 0
4	Castor oil cake 10 mds. at Re. 1-1-0 per md. and gypsum 3 cwt. at Rs. 2-6-0 per cwt.	1,285	+291	+1,940	8,567	86 9 0	+0 4 0	−113 7 0	−113 3 0
5	Sown after country fashion ...	994	...	...	6,626	66 15 0	+	−143 1 0	−143 1 0